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GEOGRAPHIC SCHOOL BULLETINS

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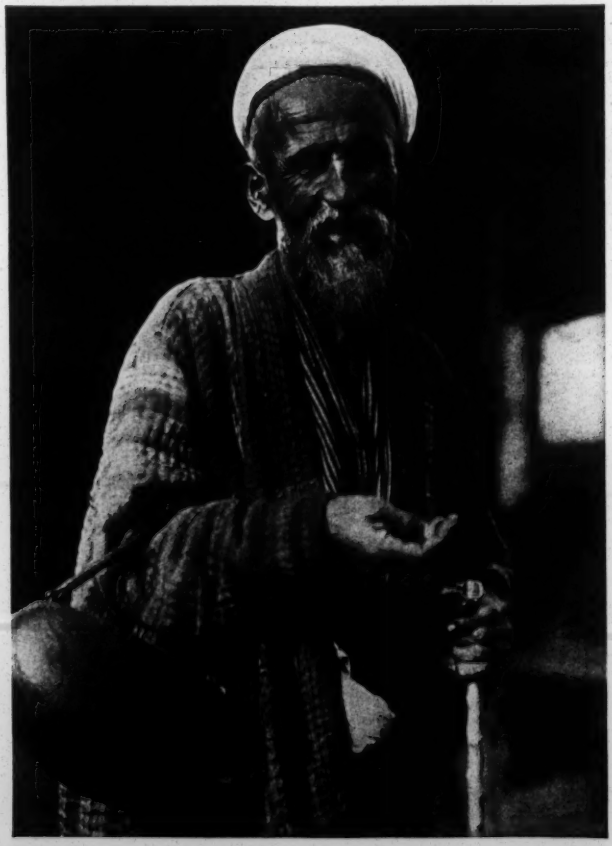


MOSLEM SMILES ABOUND IN LEBANON'S CHRISTIAN CAPITAL

Lebanon is a largely Christian unit in that French-governed section of the Arab world known as the Levant States. The capital is the Mediterranean port of Beirut, seat of the American University and a center of Christian education in the Middle East. Before Jidda in Arabia became the gateway to Mecca, Beirut's splendid harbor was Mecca's port of entry for shiploads of Moslem pilgrims who had trekked to Black Sea ports in Russia and Turkey from Central Asia. This Asiatic Moslem holy man, pledged to poverty, is one of many pious beggars who once lived in Beirut on the contributions of pilgrims from Asia. His padded cotton robe and his begging bowl are both reminiscent of his homeland rather than of Lebanon's Mediterranean coast (Bulletin No. 1).

Maynard Owen Williams

GEOGRAPHIC SCHOOL BULLETIN

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic School Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Originally entered as second-class matter January 27, 1922; re-entered as of April 27, 1943, Post Office, Washington, D. C., under Act of March 3, 1879. Copyright, 1943, by National Geographic Society, Washington, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.

Lebanon, Land of Silk and Cedars

UPRISINGS and arrests, a proclamation of independence and the suppression of the Lebanese Chamber of Deputies are signs that Lebanon (Liban), a political unit born of the last war, in the midst of this war is impatient for further changes. Nominally a mandate to France under the League of Nations, Lebanon has been demanding the freedom it has long been promised.

The Lebanese Republic is one of the four semi-independent nations that comprise the Levant States, a region of long-standing French influence in the Middle East sometimes loosely labeled Syria. The other three are the Syrian Republic to the east, the Government of Latakia to the north, and the Government of Jebel Ed Druz to the southeast. South of the Levant States lies British-mandated Palestine.

Boundaries Cut Across Coast and Mountains

Lebanon has been a separate member of the Syrian quartet since 1920. In 1926 the infant Mediterranean republic ratified a constitution. Ten years later France and Lebanon signed a treaty of alliance which was expected to give the Lebanese Republic the status of an ally rather than a subject state.

British forces occupied Lebanon and the other Levant States in 1941 when France's Vichy Government went into Nazi eclipse. The French mandate was then given to British authorities and the Free French; the latter have been superseded by the French Committee for National Liberation. Since 1941 Great Britain has been acting as guarantor of Lebanon's eventual independence.

The country consists of a roughly rectangular patch of the Mediterranean's eastern shore, about 120 miles long. It extends inland for 40 miles across the narrow coastal plain and two mountain ranges, the Lebanon and the Anti-Lebanon.

Lebanon is predominantly Christian, in contrast to the largely Moslem population of the other Levant States. In this land visited by Jesus, Christianity has had followers since its beginning. A massacre of Christians in 1861 was the occasion for bringing Lebanon's seaward slopes under French protection. Christians now outnumber Moslems (illustration, cover) by 50,000. Lebanon has 862,000 people.

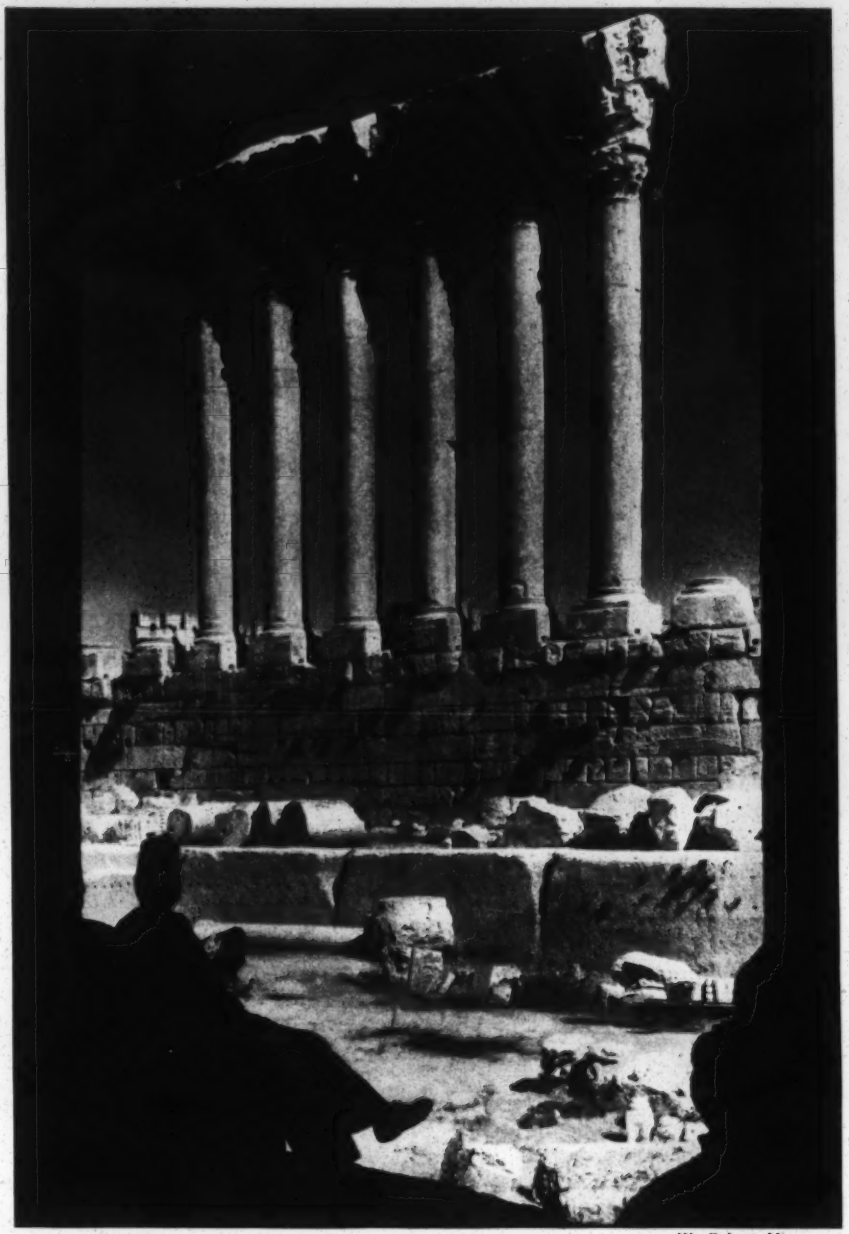
Background of Many Bible Stories

The climate is typical of the Mediterranean—warm, with "air conditioning" available in the hills. The principal agricultural products are grains, olives, grapes and wine, citrus fruits, and tobacco. Chief source of local income has been the silk industry (illustration, next page).

Lebanon is rich in Biblical lore. Its 4,000-square-mile area includes the site of the ancient city of Baalbek or Heliopolis, which Arabs say was founded by Cain (illustration, inside cover); the Mediterranean shore on which the whale coughed up Jonah; Saïda (Sidon), the city which Jesus visited on his most northerly journey; and Tyre, ancient maritime city. From the now small port of Byblos came the word "Bible," which, by association with the cargoes of papyrus shipped from the city, originally meant merely a book of papyrus.

Racial stocks rooted in this region trace to Hittites who provided wives for Old Testament heroes, to Saracens who fought Crusaders bound for Jerusalem, to Assassins who made use of murder in their religion.

Midway of the coastline is Beirut, capital of the republic and a busy port. In



W. Robert Moore

BAALBEK'S CLASSIC COLUMNS FRAME A PORTAL TO THE PAST

The Acropolis at Baalbek, in Lebanon's mountainous east, was first fortified, according to Arab legend, by Cain. There is evidence of ancient use of the site for temples to Baal. Romans, before the 4th century A.D., erected temples whose ruins are still imposing. Six stately columns of Jupiter's temple (background)—only survivors of 54 original pillars—stand more than 60 feet high, on a platform 24 feet above the ground. Three huge blocks, averaging nearly 10,000 cubic feet of stone each, are among the largest ever used for building (Bulletin No. 1).

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Teamwork Awards Added to Medals for U.S. War Heroes

WORLD War II is a teamwork war. There is little chance for individual combat on a bomber or in a submarine. When a hero is praised for some exploit today, he says—not only through modesty, but also through honesty—"I couldn't have done it alone."

In recognition of this the Army, Navy, and Marine Corps have established a new type of award to be given to all members of those units which distinguish themselves by outstanding accomplishments. Now the proud families of service men are beginning to see "unit awards" added to their relatives' other decorations and medals.

The Army's unit award is the Distinguished Unit Badge, a rectangle of royal blue ribbon with a frame of gold oak leaves (illustration, next page). It was first awarded to the famous 19th Bombardment Group.

The comparable award for the Navy and the Marine Corps is the Presidential Unit Citation. This was given first to men who served on Wake Island. This is also a rectangular bar, with three horizontal stripes of blue, gold, and scarlet.

Plane Crews and Submarine Crews Get New Unit Awards

The new Air Crew Insignia, a pair of silver wings with an anchor and shield in the center, is for officers and men who engage enemy aircraft or enemy combat vessels or bomb enemy fortified positions. Gold stars mounted on the insignia indicate additional missions. It is awarded by Navy, Marines, and Coast Guard.

The Navy has also established a Submarine Combat Insignia, showing a silver submarine with a scroll below on which gold stars may be mounted. This is awarded to officers and men who complete successful patrols during which the submarine sinks an enemy vessel or accomplishes a similar combat mission.

The unit citations are a new class, ranking between decorations and medals. Distinctions between decorations and medals are difficult, because both are "medals" in the popular sense of the word. Decorations are "medals" usually in odd shapes; medals are generally disks. In the U. S. armed forces the highest awards are classified as decorations; they are a tribute to individual gallantry or distinguished service. Medals are presented to those who have participated honorably in wars, campaigns, or expeditions, or who have performed special services. To differentiate between decorations and medals is even harder because some decorations have the word "medal" in their official name.

Bulletin No. 2, December 6, 1943 (over).

NOTICE

The three articles on insignia and decorations of the U. S. armed forces, which have appeared in the National Geographic Magazine, have now been reprinted together in a 150-page book bound in heavyweight cover paper, complete with 1,701 color illustrations. An 8-page supplement makes this the most complete treatment of the subject. It is available to members of the National Geographic Society, for themselves and for gifts, at 50¢ a copy in the United States and possessions; elsewhere 75¢. Postage is prepaid. Send orders, accompanied by remittance, to the National Geographic Society, Washington 6, D. C.

a census shortly before the war, the population was estimated at somewhat less than 160,000. Beirut was headquarters for the French administration.

Completion of the last link of the "Cairo-to-Constantinople" railway has given Beirut modern overland transportation over a route that was a highway of conquest centuries ago. Beirut is terminus of an older railway to Damascus.

Americans have a special interest in Beirut as home of American University. This co-educational institution, founded in 1866, offers high school and college courses. It now has enrolled more than 2,200 students from near-by lands for education in the English language, or for medical examinations in French. Many tongues were spoken at this cultural outpost, but "American" was most popular.

To the north is Tripoli (not to be confused with Tripoli in Libia). Here oil reaches the coast through the northern fork of the pipe line from Iraq.

Lebanon's flag is the French tricolor showing a cedar on its white band—a symbol that dates from the days when Hiram of Tyre shipped Lebanon cedar wood to Jerusalem in Palestine for use in building Solomon's temple.

NOTE: Lebanon is shown on the National Geographic Society's Map of Central Europe and the Mediterranean. A price list of maps may be obtained from the Society's headquarters in Washington, D. C.

For additional information on the Levant States, see these articles in the *National Geographic Magazine:* "Bombs over Bible Lands," August, 1941*; "Change Comes to Bible Lands," December, 1938*; and "Secrets from Syrian Hills," July, 1933*. (*Issues marked by an asterisk are included in a special list of Magazines available to teachers at 10¢ each in groups of 10.*)

Bulletin No. 1, December 6, 1943.

Maynard Owen Williams

LEBANESE SILK WORKERS SEND WORMS TO WAR

These Lebanese workers in a Beirut silk factory have brought the silkworms about halfway along the route they must travel to become the precious material now so extensively used by the armed forces for parachutes and powder bags. The cocoon is plunged into copper bowls of hot water to kill the worm before he can eat his way out of the little sleeping bag he has made for himself. The pipe running above the bowls carries steam which may be let into the water to maintain the killing temperature. The worker reels off the filament from the cocoon to revolving drums (background). The continuous thread from one cocoon may measure 875 yards. Lebanon and France in peacetime have maintained a balance in their respective silk industries. France sent Lebanon silkworm eggs, Lebanon sent France raw silk in return.

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Albania Struggles to Divorce Italy as Allied Bombs Fall

REPRESENTATIVES of Albania have issued a declaration of independence breaking their four-year bondage to Italy. Meanwhile, Allied bombs have been raining on Tirana, capital of Albania, as the war moves deeper into the seething Balkan Peninsula.

Albania is a 200-mile strip separating Yugoslavia's Dalmatian coast from Greece. The country's chief contribution to United Nations assets would be its position on the Strait of Otranto, controlling the entrance to the Adriatic Sea. The Italian side of this strait has no natural harbors to compare with Albania's ports, Durazzo and Valona.

This seemingly favorable position has been since Roman times a liability to the area now comprising Albania. Stronger powers kept the region subjugated until the Balkan War of 1912 ended more than four centuries of Turkish domination.

Because of the diversity of tribes which make up the population, Albania is accustomed to strife and struggle among her own people as well as with foreigners. Separated by high and rugged mountains, Albanian tribes are in some instances as foreign to one another as to peoples living beyond their borders, and frequent feuds have resulted.

Sixth European Oil Producer

Between 1912 and the Italian invasion in 1939, tremendous political and social changes swept over the country. To follow a provisional government set up in December, 1912, the Allied Powers chose William of Wied, a German prince, to govern Albania as a principality. He was forced to flee the country after a reign of six months. In 1925 Albania became a republic, at least in name; three years later the president, Zogu, was crowned King Zog I, and the pint-size country was again a monarchy.

Albania (10,629 square miles) is slightly larger than Vermont and supports a million people. Less than one-tenth of the rugged, rocky area (illustration, next page) was under cultivation before the war. Peacetime exports were olives, cheese, cattle, hides, bitumen, copper, and oil.

During the 20 years of comparative peace and independence before Italy invaded the country in 1939, a highway network, begun during World War I to facilitate troop movements, was improved and expanded. Air lines were established linking Tirana with Brindisi and Rome in Italy, Thessalonike (Salonika) in Greece, and Sofia in Bulgaria, as well as with other Albanian towns.

Albania's Capital Namesake of Iran's Tehran

Tirana's history dates from the 17th century when Albania was part of the Ottoman Empire. Its founder, a Turkish general, named the settlement Tehran (Tehran is the present name of the capital of Iran, or Persia) in commemoration of a Persian victory. From that name was derived Tirana. Situated in a fertile mountain-rimmed basin, in a region safe by 17th-century standards, Tirana is a city of contrasts between the primitive and the modern. In the old Turkish section ramshackle mud buildings and one-story concrete shops huddle along narrow cobbled streets; in the modern part hotels, shops, and cafes display Italian influence. Most of the 35,000 people living in Tirana before the war were Moslems.

UMI

New decorations established since the war began include the Air Medal used in all services; the Distinguished Flying Cross, which is still the higher award, was found to be inadequate to recognize the deeds of our airmen.

The Legion of Merit, used by all services, marked a departure from American custom in two ways. First it was established in degrees; and second, it was the first decoration created with award to foreigners as one of its principal functions. Americans are awarded the Legion of Merit without degree.

A third type of award is the badge, given for special proficiency, as in marksmanship, parachuting, aviation. Women have recently been included in the list of badge-wearers with the establishment by the Army of one for "Flight Nurse."

The Army has recognized that "you do it the hard way in the Infantry" by establishing two awards, one "Expert Infantryman Badge," and the other the "Combat Infantryman Badge." The first is for officers and men who "attain established proficiency standards or whose action in combat is rated satisfactory." The higher is for officers and men "whose conduct in combat is exemplary or whose combat action occurs in a major operation." These badges are similar, a silver rifle on a blue enamel rectangle outlined with silver.

Alfred T. Palmer

READ THE RIBBONS FOR A RECORD OF HER CAREER

Three ribbons hint at the remarkable record of Lt.(jg) Ann Agnes Bernatitus, only Navy nurse to escape from Bataan and Corregidor after serving under fire. Above her left pocket she wears (top) the ribbon of the Legion of Merit Medal, the first of these ever awarded. Beneath it, together, are ribbons for the American Defense (with star) and Asiatic-Pacific Medals. The new Distinguished Unit Badge is the only one always worn on the right. It was awarded for her service with the Army.

It is easy to stump all except the experts on regulations pertaining to the wearing of decorations and medals, and badges. In general, this is the procedure. The Medal of Honor is worn on a ribbon around the neck. Other decorations, medals, and badges are worn in strictly prescribed order on the left breast. During wartime, the decorations themselves are not usually worn. Their ownership is indicated by "service ribbons," short pieces of ribbon matching the suspension ribbons of the decorations.

What about the men and women who have seen service in the armed forces in World War II and, having been honorably discharged, are back in their civilian clothes? They will soon wear a gold-plated plastic lapel button with the American eagle in the center.

NOTE: See also in the *National Geographic Magazine*: "Heroes of Wartime Science and Mercy," December, 1943; "The Heraldry of Heroism," October, 1943; and "Insignia of the U. S. Armed Forces," June, 1943.

Bulletin No. 2,
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Oranges: A Bright Spot in Economic Geography

ARRIVAL in England of the first really large orange shipment in more than two years—a result of virtual control of the Mediterranean by the Allies—furnishes an elementary lesson in economic geography.

One of the oldest of cultivated fruits, originating presumably in southeastern Asia, oranges are typical climate-controlled products. They can be grown on a commercial scale only in areas in and near the tropics. In warm climates, in rich soil, with a moderate rainfall or with irrigation, oranges and their citrus cousins—lemons, limes, and grapefruit—flourish. These golden globes act as small factories to produce generous supplies of vitamin C, now considered so important in human diet. Because they can be shipped fresh and retain their freshness longer than almost any other fruit, it is possible to send this life-sustaining vitamin gift over long distances to less favored climes.

The Orange Is Botanically a Berry

When people became vitamin-conscious, there was a tremendous demand for citrus fruits by countries where they cannot be grown. Great Britain and all of Europe north of the Pyrenees and the Alps had to depend for the most part on imports from lands bordering the Mediterranean—Spain, Algeria, Tunisia, Italy, and Palestine. Great Britain even drew orange shipments from the United States, Brazil and South Africa. Thus geographic conditions shaped the economics of the citrus industry.

The orange is classified botanically as a berry. The tree is long-lived, producing profitable commercial crops when six years old (illustration, next page). The fruit's chief use is as a vitamin-rich breakfast fruit or dessert. Many tons are made into marmalade. The tough skin provides an oil used in the manufacture of perfumes, flavoring, and liqueurs. The fragrant white blossom is the traditional flower of brides.

There are many varieties of orange. Some 80 are produced in the United States, of which only about 20 are of commercial value. The United States is fortunate in having citrus fruit sources inside the borders of the country—thanks chiefly to the semi-tropical fringe of territory added to the original Union by the purchase of Florida, the annexation of Texas, and the acquisition of Arizona and California.

A Kentuckian Is First California Orange Grower

California and Florida (illustration, next page) are the chief orange-growing States. Early settlers in Florida found oranges growing wild, probably brought by Ponce de Leon and his Spaniards at the beginning of the 16th century. But it was in California that orange-growing as an industry got its start.

In 1804 a Jesuit missionary planted a grove at San Gabriel Mission. In 1841 a Kentucky trapper, William Wolfskill, established the first commercial orange grove on the spot where the Southern Pacific Railroad station in Los Angeles now stands. Wolfskill was the first grower to ship a full carload across the Rockies to eastern markets.

Citrus groves now extend from San Diego in the south to Shasta County in the north—a stretch of 450 miles. In 1939 the State produced nearly 39 million boxes of oranges.

UMI

The port which is Tirana's outlet on the Adriatic is Durazzo. Today smaller by many thousands than the capital, Durazzo was once one of the great cities of southern Europe, famous under its earlier names of Epidamnus and Dyrrachium before Tirana was founded. This ancient city has dwindled to 6,500 people.

Wars are an old story to Durazzo. Since it was founded, about 600 B.C., it has known battles within and without. Its bitter struggles over the "rights of man" spread as far as Athens, Corinth, and Sparta in a day when sailing ships, couriers, and signal fires were means of communication.

Durazzo was already a commercially important city when Rome took it over in 229 B.C. The port was frequently a starting point for Roman military expeditions through the Balkans. The Via Egnatia, a great military highway, led from Durazzo into Greece to Thessalonike and into the kingdoms of the north and east. The Roman Emperor Augustus turned the city over to a group of his veterans after the Battle of Actium in 31 B.C., and for four centuries thereafter it enjoyed great prosperity.

Its splendid economic position, however, caused its ultimate oppression. For centuries various peoples fought to possess it. The Venetians held it during the 13th, 14th, and 15th centuries, and the Turks from 1501 to 1912. Many of Durazzo's citizens are Moslems, and one of the city's most ornamental places of worship is the modern Grand Mosque, completed in 1939.

NOTE: Albania may be located on the Society's Map of Europe and the Near East.

For further information, see "Europe's Newest Kingdom," in the *National Geographic Magazine* for February, 1931*; and the following GEOGRAPHIC SCHOOL BULLETINS: "Mountainous Albania a Reluctant Aid to the Axis," November 16, 1942; and "Albania Continues in Historic Battlefield Role," January 13, 1941.

Bulletin No. 3, December 6, 1943.

Melville Chater

MUCH WATER AND FEW FAUCETS MAKE WATER-CARRYING A BIG ALBANIAN JOB

The clouds sweeping against Albania's mountains are generous with rain, swelling the country's torrential mountain rivers and supplying an abundance of underground water. But municipal water systems are few, and community wells are the usual source of an Albanian family's water supply. Early morning and late afternoon find clusters of women with jugs and water kegs around the stone-walled wells. Water drawn up in a skin bag is poured through a funnel into a keg. Two small kegs can be carried home fastened to a framework on a donkey's back.

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United States Spouts Oil in More Than Half of States

THEY had to dig a well two miles deep to get it, but they finally got it—oil in Florida. The new two-mile-deep well in Florida's Everglades starts a new page in a new chapter of the romance of petroleum in the United States.

This man-made hole in the swamp land northwest of Miami is not only the first producing well in Florida; it is the first anywhere along the nation's Atlantic seaboard within 170 miles of the coast. By contrast, the Pacific shores of the United States are oil-soggy in spots to the ocean's edge; derricks stand in the water above wells sunk into the ocean floor.

Florida becomes the twenty-fifth State to produce oil from underground. Numbering one more than half, the oil States now are in the majority.

Discoveries on Down Grade in Number and Size

The Florida development is a noteworthy advance in commercial oil production in the Gulf States east of the Mississippi River. Production in this region began late in 1939 with the opening of the first well in Mississippi near Yazoo City. Later Yazoo wells have lifted Mississippi to large-scale output.

Geologists for years had been aware that the oil-producing strata of the earth in Arkansas and Louisiana are similar in formation and age to sections underlying Mississippi, Alabama, Georgia, and Florida. The bringing in of Florida's first well now adds reality to scientists' vision of an important petroleum field in the southeastern United States.

Normally this country produces two-thirds of the world's annual oil output. Last year, and in each of the five years preceding, the United States yielded roundly 1,400 million barrels (of 42 gallons each) of a total world production of about 2,100 million barrels.

There has been, however, a steady decrease in the rate of new oil discoveries since 1936, which causes growing concern over the possibility of exhausting the reserves of oil still underground.

So far, estimates of reserves in known fields, plus new oil discoveries, have each year exceeded the national production, and have raised known reserves to a 1943 level of 20,000 million barrels. New discoveries alone, however, have declined from the 2,000-million-barrel annual total of a decade ago to 260 million barrels in 1942—less than the quantity used by civilians even at the current rationed rate.

Uncle Sam Prospective Importer

Far in advance of other nations in adapting its civilization to the internal combustion engine, the United States has already cashed nearly three-fifths of the tremendous petroleum wealth so far known to be deposited in underground pools. About 27,000 million of the 47,000 million barrels of known deposits have been brought to the surface.

Diametrically opposite is the position of the Soviet Union, Venezuela, Iraq, Iran, Kuwait, Bahrein, and Saudi Arabia, where production has been small in comparison with known reserves and new discoveries are pyramiding the estimates of oil available underground.

In the United States, as underground reserves diminish, remedial actions must be taken. Already ever deeper wells are reaching down to new levels. Later, oil may become an import instead of an export. Crude oil may be imported from

UMI

Florida, the other leading State in the citrus industry, produced about 36,000,000 boxes of oranges in 1939, great quantities of grapefruit, and tangerines and kumquats—little sisters of the orange. No irrigation of the groves is necessary in this southeastern State.

The most important commercial production of oranges is concentrated just north and south of the tropics because the trees thrive best when they "live dangerously" just outside the average frost line. Drops in temperature to a point short of freezing keep the trees healthy and productive. But there is always the chance that the temperature will sink too low and that thousands of trees will be destroyed.

Symbols of this dangerous living are the tens of thousands of smudge pots that each winter dot the groves of Florida, Texas, Arizona, and California. Unless the cold is very severe, the warm smoke from the petroleum that envelops the orchards brings trees and fruit safely through the crisis.

The world's annual orange crop ranges from 200,000,000 to 250,000,000 boxes. Of this total, the United States produces approximately a quarter. Spain normally ranks next in importance, with Brazil, Japan, Italy, and Palestine following.

NOTE: For additional material on citrus fruit, see "Southern California at Work," in the *National Geographic Magazine* for November, 1934, and "Florida—the Fountain of Youth," January 1930*; and "The ABC's of Vitamins for Victory," in the GEOGRAPHIC SCHOOL BULLETINS, May 4, 1942.

Bulletin No. 4, December 6, 1943.

Clifton Adams

ORANGES DECK FLORIDA TREES WITH CHRISTMAS TREE GLOBES

Oranges ripen in Florida's groves in time to decorate the stocky, thickly leaved trees with golden globes for a pre-Christmas festive appearance. The trees are usually planted about 25 feet apart—about 69 trees to an acre. The man on the ladder cuts each orange from the tree by clipping the stem with curved scissors. He drops it into the canvas sack hung from his shoulder, carefully in order not to bruise it. The orange's tough skin keeps the fruit fresh for weeks but if it is cut or bruised decay quickly sets in. From the sack the oranges will be poured into the boxes at the foot of the tree. They are left for several days to dry somewhat. Then packers grade them according to size and wrap each orange in tissue paper. The legal size box in Florida has two compartments, each 12 inches square and 12 inches deep. The two cubic feet of space will hold about 150 medium size oranges.

overseas to feed the refineries of an industry that exported 100 million barrels of petroleum in various forms in the last prewar year. Again, the industry may produce oil by the more costly process of extracting it from Rocky Mountain shales, estimated to contain nearly twice the 47,000-million-barrel total so far charted in underground pools.

Government and private experimentation has paved the way for the industry to follow oil-starved Germany's example of making a synthetic liquid fuel from coal. This can be made by adding hydrogen to coal under pressure and heat. The United States has virtually unlimited coal reserves which might be used for this purpose.

Progress of the petroleum industry to its newly gained majority of 25 producing States is usually dated from the opening of E. L. Drake's well in Venango County, Pennsylvania, on August 29, 1859. Within a year, wells had been opened in West Virginia, Ohio, Kentucky, and Kansas. The Civil War period added Colorado and New York.

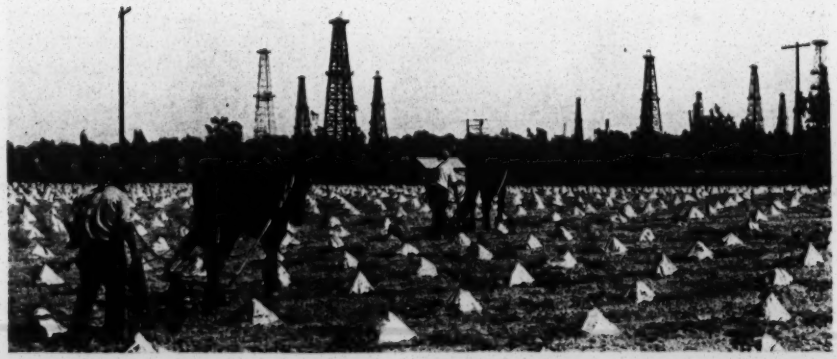
Texas and California, each in recent years producing more than any foreign country, are the nation's volume leaders, followed by Oklahoma, Louisiana, Illinois, and Kansas. Opening its first well a year ahead of Texas, Illinois has only recently jumped to top-rank production. Its 1942 volume was 14 times greater than its 1937 flow.

Newest States on the list aside from Florida are Nebraska, which joined the oil ranks in 1940, and Mississippi, enrolled in 1939. New Mexico, Wyoming, Arkansas, Michigan, Montana, Indiana, Tennessee, Missouri, Utah, and Virginia round out oil's majority roll call.

In addition to Alabama and Georgia, already listed among southeastern prospects, Iowa, Wisconsin, Minnesota, and the Dakotas are known to have underlying formations that should bring them over to the oil-producing side of the ledger. Alaska is already a producer.

NOTE: For further information, see "Today's World Turns on Oil," in the *National Geographic Magazine* for June, 1941.

Bulletin No. 5, December 6, 1943.



Clifton Adams

OIL IS THE DOWNSTAIRS CROP OF CALIFORNIA'S DOUBLE-DECK YIELD

The fertile earth of southern California, near San Pedro, yields a surface crop and a subterranean crop. Topside, tomatoes grow, each tender young plant shielded from the sun's direct rays by a pyramidal paper tent that forms an individual hothouse. Beyond, battalions of derricks rise above wells that collect the underground wealth of petroleum. In the oil business since 1875, California now produces more oil each year than any whole country other than the United States. Texas, where the first well was brought in in 1887, yields an even greater volume of oil.

UMI